

REMARKS

Reconsideration of the present application is requested. Claim 24 has been added. Claims 1-24 are pending. Example support for amendments made herein may be found in FIG. 7 and the corresponding discussion in the specification.

COMMENTS ON NOVEMBER 17, 2008 INTERVIEW

Applicant appreciates the Examiner's time in conducting an interview with Applicant's Representative (hereinafter Applicant and Applicant's Representative will be collectively referred to as "Applicant") on November 17, 2008. The following is a summary of the matters discussed during the Interview.

Prior to the Interview, Applicant provided the Examiner with a proposal for amending claim 1. The relevant portion of the proposed amendment to claim 1 is shown below.

heater control means for controlling start and stop of heating by the heater, in such a manner as to keep a sensed temperature of the liquid crystal panel to be not more than $\pm 3^{\circ}\text{C}$ of a predetermined target temperature which is within a range between 33°C and 63°C .

In support of the assertion that this amendment distinguished claim 1 over the cited art, Applicant argued that the sensing arrangement 26 of U.S. Patent No. 5,694,147 ("Gaalema") does not sense the temperature of the LCD, but instead merely senses an ambient temperature that is only arguably *influenced* by the temperature of the LCD. The Examiner was not persuaded by this amendment or argument. Particularly, the Examiner explained his interpretation that Gaalema essentially discloses sensing the temperature of the LCD, albeit indirectly. The Examiner further explained his belief that Gaalema in combination with the other cited art essentially discloses the "heater control means," of claim 1. Applicant does not necessarily agree with the Examiner.

Also during the Interview, the Examiner suggested amending claim 1 to clarify that the temperature of the liquid crystal panel is sensed by a plurality of temperature sensors, each of which senses a temperature of a different portion of the liquid crystal panel. The Examiner indicated that such an amendment would be sufficient to overcome the current art grounds of rejection. Applicant countered by proposing the following amendment to claim 1.

...heater control means for controlling start and stop of heating by the heater, in such a manner as to keep a sensed temperature of the liquid crystal panel to be not more than $\pm 3^{\circ}\text{C}$ of a predetermined target temperature which is within a range between 33°C and 63°C , the sensed temperature of the liquid crystal panel being determined by sensing a temperature of a plurality of separate sections of the liquid crystal panel.

After briefly considering this amendment, the Examiner indicated that such an amendment would likely be sufficient to overcome the current rejection because the references (particularly Gaalema) do not disclose or fairly suggest at least, a sensed temperature of a liquid crystal panel determined by "sensing a temperature of a plurality of separate sections of the liquid crystal panel."

By way of this response, Applicant has amended claim 1 as shown immediately above. Applicant has also amended claims 7 and 13 in a similar manner.

Because the Examiner indicated that an updated search would be necessary based on Applicant's proposed amendments, Applicant has filed this Amendment concurrently with a Request for Continued Examination (RCE).

No other pertinent matters were discussed during the Interview.

PRIOR ART REJECTIONS

REJECTION UNDER 35 U.S.C. § 103 IN VIEW OF MIYATA, DAVIS AND GAALEMA

Claims 1-2, 4-8, 10-14 and 16-23 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over 2002/0033789 ("Miyata") in view of U.S.

Patent No. 5,027,111 ("Davis") and further in view of U.S. Patent No. 5,694,147 ("Gaalema"). Applicant disagrees with the Examiner's rejection for the following reasons.

Applicant has amended claim 1 as discussed during the November 17, 2008 Interview. Claim 1 is believed to be patentable over the cited art at least by virtue of the amendments made herein. In support of this assertion, Applicant provides the following arguments.

The liquid crystal display of claim 1 includes, *inter alia*, a "heater control means for controlling start and stop of heating by the heater, in such a manner as to keep a sensed temperature of the liquid crystal panel to be not more than $\pm 3^{\circ}\text{C}$ of a predetermined target temperature which is within a range between 33°C and 63°C , the sensed temperature of the liquid crystal panel being determined by sensing a temperature of a plurality of separate sections of the liquid crystal panel." This feature is not disclosed or suggested by the cited art, taken singly or in combination.

The Examiner correctly recognizes that Miyata fails to teach or fairly suggest the "heater control means," of claim 1, and relies upon Davis and Gaalema to make up for these deficiencies. Both Davis and Gaalema, however, fail to disclose or suggest at least a "heater control means for controlling start and stop of heating by the heater, in such a manner as to keep a sensed temperature of the liquid crystal panel to be not more than $\pm 3^{\circ}\text{C}$ of a predetermined target temperature which is within a range between 33°C and 63°C , the sensed temperature of the liquid crystal panel being determined by sensing a temperature of a plurality of separate sections of the liquid crystal panel," as required by claim 1. Thus, even in combination – assuming *arguendo* such a combination could be made, which Applicant does not admit – the references fail to render claim 1 obvious.

Davis discloses a LCD unit including a temperature maintaining means (117, 125, 104, 105). The temperature maintaining means maintains the temperature of the LCD 120 within an operating range notwithstanding ambient temperature and humidity variations. According to column 6, lines

43-47, a temperature sensor is used to monitor the temperature of the LCD medium. In more detail, the temperature sensor is a thermistor element 123 disposed immediately behind a window 117 and the LCD 120 such that the thermistor element 123 receives the same radiant heat loading from the incident light as the LCD 120. See, Davis at 11:25-11:29, FIG. 3.

Contrary to claim 1, Davis does not disclose or fairly suggest that the temperature sensor senses a temperature of the LCD "by sensing a temperature of a plurality of separate sections of the liquid crystal panel," as required by claim 1. Indeed, Davis discloses the use of a single thermistor element 123, but this single thermistor element senses temperature by virtue of its arrangement to receive the same radiant heat loading as the LCD 120. It does not sense a temperature of separate sections of the LCD. Therefore, Davis fails to disclose "heater control means for controlling start and stop of heating by the heater, in such a manner as to keep a sensed temperature of the liquid crystal panel to be not more than $\pm 3^{\circ}\text{C}$ of a predetermined target temperature... the sensed temperature of the liquid crystal panel being determined by sensing a temperature of a plurality of separate sections of the liquid crystal panel," as required by claim 1.

Gaalema discloses a liquid crystal integrated circuit display including an arrangement for maintaining the liquid crystal at a controlled temperature. According to Gaalema, when a temperature reaches a certain preselected level (e.g., target temperature of 40°), differential amplifier 40 has no output and the heating arrangement 24 is off. However, as the temperature decreases below 40° , the output from differential amplifier 40 increases thereby activating the control heating arrangement 24. When activated, the heating arrangement 24 heats the liquid crystal material 14 disposed over the integrated circuit substrate 12.

In Gaalema, the sensed temperature refers to an *ambient temperature* sensed by sensing arrangement 26, which is located within the substrate 12. The sensing arrangement 26 does not sense a temperature of a plurality of separate sections of the liquid crystal panel to determine a sensed temperature

of a liquid crystal panel. At most, the sensing arrangement 26 only arguably detects the ambient temperature as influenced by the temperature of the liquid crystal panel, in addition to any other influences on the ambient temperature detected by the sensing arrangement 26. Accordingly, Gaalema also fails to disclose or fairly suggest at least, "heater control means for controlling start and stop of heating by the heater, in such a manner as to keep a sensed temperature of the liquid crystal panel to be not more than $\pm 3^{\circ}\text{C}$ of a predetermined target temperature... the sensed temperature of the liquid crystal panel being determined by sensing a temperature of a plurality of separate sections of the liquid crystal panel," as required by claim 1.

Because none of Miyata, Davis or Gaalema disclose or fairly suggest the "heater control means," of claim 1, the references fail to render claim 1 obvious. Independent claims 7 and 13 distinguish over Miyata, Davis and/or Gaalema for at least somewhat similar reasons. Claims 2, 4-6, 8, 10-12, 14 and 16-22 distinguish over Miyata, Davis and/or Gaalema at least by virtue of their dependency from Claims 1, 7 or 13.

FURTHER PRIOR ART REJECTION

Claims 3, 9 and 15 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Miyata, Davis, Gaalema and further in view of U.S. Patent No. 7,106,287 ("Ham"). This rejection is respectfully traversed for the reasons set forth in Applicant's previous Response, the entire contents of which are incorporated herein by reference. In addition, Ham suffers from the same deficiencies as Miyata, Davis and Gaalema with respect to claims 1, 7 and 13. Therefore, even assuming *arguendo* that Miyata, Davis, Gaalema and/or Ham could be combined, which Applicant does not admit, the combination fails to render claims 3, 9, and 15 obvious because the combination of references fails to disclose or suggest all features of claims 1, 7 or 13, from which claims 3, 9 and 15 depend. Accordingly, claims 3, 9 and 15 are patentable over Miyata, Davis, Gaalema and/or Ham, taken singly or in combination.

NEW CLAIM 24

Applicant has added new claim 24, which also distinguishes over Miyata, Davis and Gaalema, taken singly or in combination. In more detail, the cited references (taken singly or in combination) fail to disclose or fairly suggest at least a heater control means including, "*a plurality of temperature sensors, each of the plurality of temperature sensors being configured to sense the temperature of a separate section of the liquid crystal panel.*" For at least this reason, allowance of new claim 24 is requested.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of the pending claims in connection with the present application is earnestly solicited.

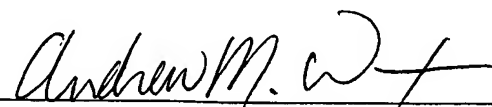
Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant hereby petitions for a two (2) month extension of time for filing a reply to the outstanding Office Action and submit the required \$490 extension fee herewith.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Andrew M. Waxman, Reg. No. 56,007, at the number of the undersigned listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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